

Application No. 10/736,654

Amendments to the Specification:

Please substitute paragraph [0001] with the following amended paragraph:

[0001] This application is related to U.S. Patent Application No. 10/737,355, Brent R. Jones (Attorney Docket No. A3075) and U.S. Patent Application No. 10/736,656, Brent R. Jones et al, (Attorney Docket No. D/A7035Q), filed concurrently, the entire disclosures of which are incorporated herein by reference.

Please substitute paragraph [0030] with the following amended paragraph:

[0030] As shown in FIGS. 4-6, the melt plates 60 can include a plurality of anchor tabs 46 or sliver control tabs 48 or a combination thereof. As a group, these surface features help maintain the tentative bond between ink and melt plate needed to prevent ink chunk and break-off chips from causing printer cleanliness and functional problems. Melt plates having tabs such as these are disclosed in more detail in U.S. Patent No. 6,530,655.

Please substitute paragraph [0035] with the following amended paragraph:

[0035] [0036] The combination of appropriately sized and shaped cutouts 44, protrusions 46, and control tabs 48 is the preferred way to produce anchoring as they can be added to a melt plate forming tool without resulting in appreciable cost increases. Roughing the surface would also provide a bonding benefit and might be employed, though the process would add to costs and could cause undesirable burrs or add particulate matter to the back side where they might degrade the thin electrical insulation film.

Please substitute paragraph [0036] with the following amended paragraph:

[0036] The drip plate 29 also includes a drip plate point or drip point that can be configured in any fashion that causes ink to drip or flow from a desired location. This could be literally a point, but more typically would be a narrow or tapered shape that may have a flat or rounded portion at the end. ~~The drip plate 29 also includes a drip plate point or drip point that can be configured in any fashion that causes ink to drip or flow from a desired location.~~

Application No. 10/736,654

~~location. This could be literally a point, but more typically a wide or narrow, or tapered shape that may have a flat or rounded portion at the one~~

Please substitute paragraph [0037] with the following amended paragraph:

[0037] In embodiments, the drip plate 29 has a lower portion 74 that is not coplanar with the upper portion 76 ~~and includes the drip plate point~~ and includes the drip plate point. In embodiments, the drip plate 29 has a lower portion 74 that is not coplanar with the upper portion 76. See FIGS. 3 and 4. The bent tip 74 directs ink flow so that it "reaches" out over a reservoir, such as, for example, a print head reservoir (not shown). The bent tip 74 allows the ink loader to be positioned well back from the upper portion of a tilted print head. This is useful because the print head itself will often be wrapped in insulation, which can interfere with the ink loader when the head tilts between its maintenance, standby, and parked positions. Having a separation between the loader and the print head yields greater flexibility in printer design.

Please substitute paragraph [0021] with the following amended paragraph:

[0021] FIG. 2 illustrates the printer 10 with its ink access cover 20 raised. The printer 10 includes an ink load linkage element 30, and an ink stick feed assembly or ink loader 16. A key plate or key plates 18 are positioned within the printer over a chute [[9]] divided into multiple feed channels 25. In the embodiment illustrated in claim 1, multiple key plates 18 are shown. The key plates 18 include insertion openings or receptacles 24. Each of the four ink colors has a dedicated channel for loading, feeding, and melting in the ink loader. The channels 25 guide the solid ink sticks toward the melt plate assemblies 70 located at the opposite end of the channels from the key plate insertion opening. These melt plate assemblies 70 are shown in FIGS. 3-8. FIG. 8 is an exploded view of the channels 25 and the heat plate assemblies 70. They melt the ink and feed it into the individual ink color reservoirs within a print head (not shown) inside the printer 10.

Please substitute paragraph [0022] with the following amended paragraph:

Application No. 10/736,654

[0022] In the raised position, the attached ink load linkage element 30 pivots and causes the sliding yoke 17 to be positioned at the rear of the channels 25, disclosing the ink stick openings 24 in the key plates 18. The ink load linkage 30 is pivotally attached to the ink access cover 20 and a yoke 17. When the access cover 20 is raised, the pivot arms 22 pull on the pivot pins [[23]] of the yoke and cause it to slide back to a clear position beyond the ink insertion openings 24, thereby allowing ink to be inserted through the ink insertion openings into the ink loader. Yoke 17 is coupled to the chute [[9]] such that it is able to slide from the rear to the front of the chute (toward the melt plates) above the key plates 18 as the ink access cover is closed. Ink stick push blocks are linked to the yoke so that this movement of the yoke 17 assists in moving the individual ink sticks 12 forward in the feed channels 25 toward the melt plates 60. Hook features on the yoke 17 allow it to snap in place on the channel side flanges when positioned beyond the normal range of motion, where even in that forced position, it remains clipped to the channel flanges with partial overlap.

Please substitute paragraph [0023] with the following amended paragraph:

[0023] Preloading of each color row of ink sticks against the corresponding melt plate 60 A-D is facilitated by use of constant force springs (not shown) acting on push blocks which push the individual ink sticks 12 toward the drip plates 29A-D, as seen in FIG. 2. The springs are wound on rotatable drums (not shown) housed in the push blocks.

Please substitute paragraph [0041] with the following amended paragraph:

[0041] Instead of a single expensive monolithic adapter, the present design includes four smaller identical units 80 that couple each of the heated melt plate assemblies 70 to its corresponding ink loader channel 25. Melt plate adapters 80 position and retain the drip plates 29A-D and melt plates 60A-D. The adapters 80 are offset a desired distance from the front of each channel 25. The melt plate adapters 80 mount to each channel 25 and function as a safety barrier against high temperature and voltage by enclosing the top, front and sides of the melt plate area. These individual adapters 80 are typically made of high

Application No. 10/736,654

temperature plastic. Each of the four (one for each channel) melt plate assemblies 70 are identical and use the same length wire, adding to the cost savings over the existing design. The adapters 80 also have features that allow the drip plate to easily clip into place and mounting tabs that clip into place on the front of the ink loader chute. For example, a retaining clip 82 is shown that holds the drip plate in position and also engages features in the chute to hold the melt assembly in place. The adapters also may incorporate features with a variety of different configurations to secure the heater thermistor and/or fuse, route and secure cabling and provide strain relief to the cables so the point of their attachment is not stressed. Additionally, the adapter can include features to attach a separate low mass clip that could be used to secure heaters or heater components.